Frequency Mixer HJK-ED13191/1

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	CONVERSION LOSS IF FIXED @IF(OUT)=1020MHz (dB) @LO (dBm)		
		+14	+17	+20
760.0	1780.0	13.44	11.15	9.16
820.0	1840.0	13.29	10.96	8.81
880.0	1900.0	12.56	9.88	8.07
940.0	1960.0	12.14	9.40	7.82
1000.0	2020.0	11.47	9.14	7.96
1060.0	2080.0	10.78	8.80	7.89
1120.0	2140.0	11.55	9.15	8.08
1180.0	2200.0	10.80	8.76	7.99
1240.0	2260.0	10.18	8.47	7.82
1300.0	2320.0	9.98	8.50	7.88
1360.0	2380.0	9.16	8.24	7.80
1420.0	2440.0	9.03	8.12	7.77
1500.0	2520.0	9.22	8.30	8.03
1560.0	2580.0	9.24	8.75	8.72
1640.0	2660.0	9.20	8.51	8.16
1700.0	2720.0	8.74	7.96	7.51
1780.0	2800.0	8.40	7.66	7.23
1840.0	2860.0	8.16	7.54	7.20
1920.0	2940.0	7.91	7.39	7.11
1980.0	3000.0	7.70	7.22	6.95
2060.0	3080.0	7.76	7.28	7.03
2120.0	3140.0	7.82	7.40	7.17
2200.0	3220.0	7.95	7.47	7.11
2260.0	3280.0	7.91	7.68	7.54
2340.0	3360.0	7.75	7.56	7.51
2400.0	3420.0	7.81	7.63	7.62
2480.0	3500.0	7.60	7.36	7.31
2540.0	3560.0	7.89	7.78	7.84
2620.0	3640.0	7.94	7.84	7.91
2680.0	3700.0	7.87	7.75	7.81
2760.0	3780.0	7.77	7.54	7.48
2820.0	3840.0	7.86	7.57	7.45
2900.0	3920.0	8.13	7.78	7.61
2960.0	3980.0	8.16	7.60	7.22
3040.0	4060.0	8.17	7.45	6.90
3100.0	4120.0	8.42	7.62	6.97
3180.0	4200.0	9.09	8.09	7.29
3240.0	4260.0	9.52	8.32	7.47
3320.0	4340.0	9.92	8.63	7.72
3380.0	4400.0	10.23	9.05	8.08

RF (IN) (MHz)	LO (MHz)	IP3 INPUT (dBm) @LO (dBm)		
		+14	+17	+20
760.0	1780.0	15.21	16.60	17.30
820.0	1840.0	13.91	19.54	18.11
880.0	1900.0	14.25	21.19	18.71
940.0	1960.0	15.64	18.27	18.16
1000.0	2020.0	17.28	17.43	18.36
1060.0	2080.0	15.36	17.62	23.00
1120.0	2140.0	16.58	19.91	21.25
1180.0	2200.0	22.45	19.19	21.95
1240.0	2260.0	18.30	19.32	23.19
1300.0	2320.0	17.73	21.28	25.98
1360.0	2380.0	20.88	27.51	31.87
1420.0	2440.0	20.81	25.83	28.69
1500.0	2520.0	23.01	26.27	29.18
1560.0	2580.0	29.05	28.29	27.43
1640.0	2660.0	25.22	27.50	28.31
1700.0	2720.0	28.21	29.16	32.82
1780.0	2800.0	27.95	29.39	31.00
1840.0	2860.0	29.81	29.02	32.40
1920.0	2940.0	30.29	28.87	31.35
1980.0	3000.0	27.88	28.44	32.33
2060.0	3080.0	26.42	28.40	32.89
2120.0	3140.0	27.06	29.13	31.66
2200.0	3220.0	26.73	29.55	31.05
2260.0	3280.0	28.06	32.99	33.02
2340.0	3360.0	27.08	31.28	33.23
2400.0	3420.0	27.16	30.90	33.42
2480.0	3500.0	26.15	29.83	40.08
2540.0	3560.0	26.96	31.35	35.31
2620.0	3640.0	25.80	31.27	40.94
2680.0	3700.0	25.37	32.26	37.06
2760.0	3780.0	24.70	29.23	32.45
2820.0	3840.0	24.37	28.72	34.01
2900.0	3920.0	24.38	27.39	29.98
2960.0	3980.0	24.01	25.87	27.33
3040.0	4060.0	22.28	24.23	26.36
3100.0	4120.0	20.94	23.43	26.63
3180.0	4200.0	19.22	22.14	25.54
3240.0	4260.0	17.92	20.81	24.17
3320.0	4340.0	16.79	19.51	22.59
3380.0	4400.0	16.50	18.88	22.27

RF (IN) (MHz)	LO (MHz)	COMPRESSION @RF IN=+15dBm (dB) @LO (dBm)		
		+14	+17	+20
760.0	1780.0	6.17	5.55	4.77
820.0	1840.0	1.13	1.63	2.00
880.0	1900.0	0.44	1.24	1.53
940.0	1960.0	0.49	1.41	1.61
1000.0	2020.0	0.66	1.38	1.35
1060.0	2080.0	0.60	1.14	0.92
1120.0	2140.0	-0.13	0.87	0.83
1180.0	2200.0	0.11	0.92	0.77
1240.0	2260.0	0.44	0.85	0.64
1300.0	2320.0	0.52	0.40	0.20
1360.0	2380.0	0.83	0.32	0.21
1420.0	2440.0	1.06	0.50	0.28
1500.0	2520.0	1.98	1.10	0.50
1560.0	2580.0	1.72	0.89	0.35
1640.0	2660.0	0.13	0.14	0.13
1700.0	2720.0	0.04	0.19	0.15
1780.0	2800.0	0.12	0.20	0.12
1840.0	2860.0	0.14	0.16	0.09
1920.0	2940.0	0.18	0.18	0.09
1980.0	3000.0	0.41	0.26	0.12
2060.0	3080.0	0.39	0.23	0.12
2120.0	3140.0	0.28	0.18	0.10
2200.0	3220.0	0.16	0.14	0.09
2260.0	3280.0	0.15	0.09	0.06
2340.0	3360.0	0.25	0.14	0.05
2400.0	3420.0	0.32	0.18	0.06
2480.0	3500.0	0.35	0.20	0.07
2540.0	3560.0	0.29	0.17	0.03
2620.0	3640.0	0.27	0.15	0.05
2680.0	3700.0	0.20	0.11	0.04
2760.0	3780.0	0.28	0.17	0.10
2820.0	3840.0	0.31	0.17	0.09
2900.0	3920.0	0.41	0.29	0.18
2960.0	3980.0	0.45	0.40	0.31
3040.0	4060.0	0.45	0.42	0.31
3100.0	4120.0	0.50	0.52	0.36
3180.0	4200.0	0.38	0.61	0.47
3240.0	4260.0	0.15	0.55	0.55
3320.0	4340.0	0.02	0.43	0.57
3380.0	4400.0	0.00	0.30	0.47

Typical Performance Data

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=2600MHz (dB) @LO (dBm) +17
720.0	1880.0	11.54
685.6	1914.4	10.95
651.3	1948.7	10.67
616.9	1983.1	9.81
582.6	2017.4	9.67
548.2	2051.8	9.35
513.9	2086.1	8.95
479.5	2120.5	8.99
445.2	2154.8	8.73
410.8	2189.2	8.42
376.5	2223.5	8.70
342.1	2257.9	8.47
307.7	2292.3	8.55
273.4	2326.6	8.91
239.0	2361.0	9.05
204.7	2395.3	9.75
170.3	2429.7	10.59
136.0	2464.0	11.58
101.6	2498.4	13.66
67.3	2532.7	16.52
32.9	2567.1	21.94
10.0	2610.0	31.47
96.6	2696.6	12.78
183.2	2783.2	9.18
298.7	2898.7	8.11
385.3	2985.3	7.87
500.8	3100.8	7.29
587.4	3187.4	7.20
702.9	3302.9	7.30
789.5	3389.5	7.21
905.0	3505.0	7.88
991.6	3591.6	7.90
1107.1	3707.1	7.92
1193.7	3793.7	7.88
1309.2	3909.2	8.13
1395.8	3995.8	8.01
1511.3	4111.3	8.84
1597.9	4197.9	8.09
1713.4	4313.4	7.68
1800.0	4400.0	7.97

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=2500MHz (dB) @LO (dBm) +17
10.0	2510.0	32.01
50.0	2550.0	18.49
90.0	2590.0	14.00
130.0	2630.0	11.27
170.0	2670.0	9.66
210.0	2710.0	8.74
250.0	2750.0	8.19
290.0	2790.0	7.92
330.0	2830.0	7.76
390.0	2890.0	7.50
430.0	2930.0	7.38
490.0	2990.0	7.25
530.0	3030.0	7.25
590.0	3090.0	7.14
630.0	3130.0	7.19
690.0	3190.0	7.21
730.0	3230.0	7.27
790.0	3290.0	7.47
830.0	3330.0	7.59
890.0	3390.0	7.54
930.0	3430.0	7.45
990.0	3490.0	7.33
1030.0	3530.0	7.74
1090.0	3590.0	8.02
1130.0	3630.0	8.07
1190.0	3690.0	7.90
1230.0	3730.0	7.78
1290.0	3790.0	7.85
1330.0	3830.0	7.90
1390.0	3890.0	8.10
1430.0	3930.0	8.18
1490.0	3990.0	8.64
1530.0	4030.0	9.34
1590.0	4090.0	8.38
1630.0	4130.0	8.13
1690.0	4190.0	7.67
1730.0	4230.0	7.57
1790.0	4290.0	7.58
1830.0	4330.0	7.67
1890.0	4390.0	7.68

IF (OUT) (MHz)	LO (MHz)	CONVERSION LOSS VS. IF FREQUENCY @RF(IN)=2700MHz (dB) @LO (dBm) +17
750.0	1950.0	11.18
730.0	1970.0	10.59
710.0	1990.0	10.19
690.0	2010.0	10.20
670.0	2030.0	10.17
650.0	2050.0	10.08
630.0	2070.0	9.72
610.0	2090.0	9.39
590.0	2110.0	9.33
570.0	2130.0	9.37
550.0	2150.0	9.04
530.0	2170.0	8.60
510.0	2190.0	8.42
490.0	2210.0	8.57
470.0	2230.0	8.52
450.0	2250.0	8.34
430.0	2270.0	8.14
410.0	2290.0	8.20
390.0	2310.0	8.33
370.0	2330.0	8.33
350.0	2350.0	8.17
330.0	2370.0	8.14
310.0	2390.0	8.28
290.0	2410.0	8.52
270.0	2430.0	8.56
250.0	2450.0	8.67
230.0	2470.0	8.91
210.0	2490.0	9.33
190.0	2510.0	9.86
170.0	2530.0	10.28
150.0	2550.0	10.85
130.0	2570.0	11.63
110.0	2590.0	12.79
100.0	2600.0	13.44
80.0	2620.0	14.87
70.0	2630.0	15.69
50.0	2650.0	17.96
40.0	2660.0	19.66
20.0	2680.0	25.37
10.0	2690.0	30.82

Typical Performance Data

LO (MHz)	LO-RF ISOLATION (dB) @LO (dBm)			LO-IF ISOLATION (dB) @LO (dBm)		
	+14	+17	+20	+14	+17	+20
1780.0	37.75	37.91	37.80	29.87	30.26	30.79
1840.0	38.07	38.38	38.54	30.09	30.57	31.25
1900.0	38.30	38.66	38.79	30.36	30.96	31.77
1960.0	38.54	38.87	39.06	30.39	31.17	32.32
2020.0	38.58	38.90	39.02	30.47	31.51	32.95
2080.0	39.16	39.56	39.97	30.52	31.36	32.38
2140.0	39.55	40.10	40.81	29.87	30.62	31.67
2200.0	40.81	41.33	41.92	29.32	30.00	30.98
2260.0	41.38	42.03	42.85	28.86	29.65	30.47
2320.0	42.20	43.06	43.98	27.99	28.69	29.39
2380.0	42.70	43.60	44.43	27.40	28.06	28.64
2440.0	43.71	43.89	44.06	26.41	26.99	27.65
2520.0	44.23	43.91	42.76	24.69	25.13	25.74
2580.0	42.24	41.24	42.61	24.05	25.16	26.52
2660.0	42.23	50.90	56.16	25.88	28.51	30.90
2720.0	34.35	32.37	30.65	28.33	31.13	32.91
2800.0	40.69	41.40	42.03	29.66	31.81	33.30
2860.0	44.89	44.52	44.18	30.03	31.74	33.02
2940.0	48.26	46.25	43.66	29.53	30.97	32.33
3000.0	52.19	51.60	47.84	28.75	29.99	31.22
3080.0	47.48	47.33	46.84	28.53	29.89	31.44
3140.0	48.31	47.10	45.77	28.41	29.69	31.15
3220.0	45.89	45.88	45.25	28.11	29.33	30.71
3280.0	42.53	42.69	42.88	28.61	29.37	29.75
3360.0	37.36	35.87	34.44	30.66	32.86	35.09
3420.0	36.65	35.07	33.76	33.36	36.28	39.46
3500.0	33.44	32.68	31.67	33.90	34.78	34.26
3560.0	28.99	28.67	28.46	31.59	31.91	31.55
3640.0	28.80	29.17	29.38	29.69	30.01	29.94
3700.0	28.84	29.10	29.30	28.92	29.23	29.23
3780.0	32.01	33.38	34.60	29.11	29.34	29.32
3840.0	37.29	37.42	36.35	29.97	29.97	30.09
3920.0	37.25	31.95	29.23	31.80	32.11	32.54
3980.0	32.52	29.09	27.08	34.47	35.53	36.75
4060.0	29.34	27.63	26.15	38.78	40.37	41.27
4120.0	27.79	26.74	25.66	43.44	45.32	45.22
4200.0	27.17	26.45	25.54	64.59	52.33	46.30
4260.0	26.83	26.06	25.52	55.15	47.29	43.44
4340.0	26.07	25.42	25.11	45.42	42.76	40.46
4400.0	25.35	25.10	24.61	41.42	39.99	38.04

RF (IN) (MHz)	LO (MHz)	RF-IF ISOLATION (dB) @LO (dBm)		
		+14	+17	+20
760.0	1780.0	35.21	31.83	28.75
820.0	1840.0	37.86	32.40	31.47
880.0	1900.0	43.46	36.16	35.28
940.0	1960.0	46.62	43.01	38.42
1000.0	2020.0	42.00	40.42	37.98
1060.0	2080.0	36.50	36.34	38.87
1120.0	2140.0	33.75	34.89	37.84
1180.0	2200.0	31.01	33.84	38.88
1240.0	2260.0	30.42	31.87	33.36
1300.0	2320.0	29.35	30.47	31.99
1360.0	2380.0	28.38	28.88	29.62
1420.0	2440.0	29.53	30.22	30.85
1500.0	2520.0	29.94	32.08	35.49
1560.0	2580.0	37.79	31.46	25.78
1640.0	2660.0	26.30	23.74	22.64
1700.0	2720.0	25.35	25.08	25.21
1780.0	2800.0	26.20	26.93	28.07
1840.0	2860.0	27.60	28.73	30.33
1920.0	2940.0	28.82	30.33	32.24
1980.0	3000.0	29.20	30.70	32.67
2060.0	3080.0	28.92	30.04	31.62
2120.0	3140.0	28.93	29.90	31.32
2200.0	3220.0	27.88	28.20	29.25
2260.0	3280.0	30.76	32.35	33.92
2340.0	3360.0	31.03	32.94	35.83
2400.0	3420.0	32.20	33.95	37.28
2480.0	3500.0	33.53	35.51	40.56
2540.0	3560.0	32.53	32.84	32.71
2620.0	3640.0	31.79	31.18	31.70
2680.0	3700.0	31.43	31.30	32.84
2760.0	3780.0	33.83	33.28	33.78
2820.0	3840.0	37.35	34.69	32.61
2900.0	3920.0	37.56	33.02	29.38
2960.0	3980.0	39.14	37.11	34.89
3040.0	4060.0	32.28	32.47	34.01
3100.0	4120.0	32.49	33.73	35.71
3180.0	4200.0	33.11	34.81	35.90
3240.0	4260.0	32.20	33.30	34.00
3320.0	4340.0	32.03	34.24	35.75
3380.0	4400.0	32.36	35.36	38.68

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF VSWR (:1) @LO (dBm)		
		+14	+17	+20
760.0	1780.0	2.47	1.91	1.51
820.0	1840.0	2.46	1.82	1.32
880.0	1900.0	2.22	1.54	1.11
940.0	1960.0	2.21	1.52	1.19
1000.0	2020.0	2.25	1.60	1.33
1060.0	2080.0	2.10	1.56	1.49
1120.0	2140.0	2.25	1.64	1.58
1180.0	2200.0	2.22	1.74	1.77
1240.0	2260.0	2.14	1.79	1.88
1300.0	2320.0	2.19	1.82	1.87
1360.0	2380.0	2.08	1.90	2.03
1420.0	2440.0	2.09	1.88	1.97
1500.0	2520.0	2.08	1.84	1.88
1560.0	2580.0	2.06	1.89	1.93
1640.0	2660.0	2.03	1.96	2.07
1700.0	2720.0	1.98	1.91	2.02
1780.0	2800.0	1.92	1.88	1.98
1840.0	2860.0	1.91	1.89	1.97
1920.0	2940.0	1.93	1.93	2.01
1980.0	3000.0	1.86	1.86	1.93
2060.0	3080.0	1.86	1.84	1.88
2120.0	3140.0	1.90	1.84	1.85
2200.0	3220.0	2.20	2.06	1.98
2260.0	3280.0	2.15	2.19	2.26
2340.0	3360.0	1.92	1.95	2.04
2400.0	3420.0	1.87	1.88	1.97
2480.0	3500.0	1.66	1.59	1.62
2540.0	3560.0	1.78	1.81	1.92
2620.0	3640.0	1.63	1.66	1.79
2680.0	3700.0	1.55	1.54	1.65
2760.0	3780.0	1.41	1.32	1.38
2820.0	3840.0	1.37	1.18	1.18
2900.0	3920.0	1.52	1.27	1.11
2960.0	3980.0	1.68	1.43	1.28
3040.0	4060.0	1.91	1.66	1.49
3100.0	4120.0	2.14	1.90	1.73
3180.0	4200.0	2.54	2.18	1.94
3240.0	4260.0	2.77	2.32	2.02
3320.0	4340.0	2.89	2.38	2.02
3380.0	4400.0	3.05	2.53	2.11

LO (MHz)	LO VSWR (:1) @LO (dBm)		
	+14	+17	+20
1780.0	11.24	11.09	10.89
1840.0	12.44	12.09	11.53
1900.0	13.49	13.29	12.80
1960.0	15.13	14.74	13.92
2020.0	17.05	16.11	14.74
2080.0	17.57	17.22	16.56
2140.0	19.76	18.50	16.72
2200.0	21.46	20.22	18.30
2260.0	22.29	21.20	19.76
2320.0	22.00	19.98	16.89
2380.0	19.54	18.30	16.89
2440.0	17.39	15.81	13.92
2520.0	13.19	11.61	9.85
2580.0	10.31	9.38	8.55
2660.0	7.70	7.25	6.78
2720.0	6.42	5.97	5.49
2800.0	4.98	4.60	4.26
2860.0	3.98	3.70	3.48
2940.0	2.99	2.78	2.63
3000.0	2.51	2.34	2.23
3080.0	2.13	2.03	1.98
3140.0	2.02	2.00	2.00
3220.0	2.04	2.10	2.18
3280.0	2.14	2.25	2.35
3360.0	2.31	2.46	2.59
3420.0	2.39	2.52	2.61
3500.0	2.54	2.66	2.73
3560.0	2.75	2.93	3.08
3640.0	3.00	3.18	3.34
3700.0	2.98	3.11	3.20
3780.0	2.92	3.01	3.06
3840.0	2.83	2.91	2.97
3920.0	2.68	2.72	2.75
3980.0	2.68	2.72	2.73
4060.0	2.73	2.78	2.79
4120.0	2.73	2.79	2.84
4200.0	2.69	2.75	2.79
4260.0	2.72	2.75	2.76
4340.0	2.73	2.77	2.77
4400.0	2.73	2.80	2.84

IF (OUT) (MHz)	IF VSWR @LO=3720MHz (:1) @LO (dBm)		
	+14	+17	+20
10.1	72.39	78.97	86.86
90.1	11.85	10.96	10.31
170.1	4.22	4.09	4.03
250.1	2.35	2.43	2.53
330.1	1.71	1.88	2.05
410.1	1.49	1.69	1.88
490.1	1.52	1.69	1.87
570.1	1.63	1.75	1.89
650.1	1.80	1.86	1.96
730.1	1.94	1.96	2.02
810.1	2.07	2.05	2.07
890.1	2.18	2.13	2.12
970.1	2.27	2.18	2.15
1050.1	2.31	2.19	2.13
1130.1	2.28	2.15	2.07
1210.1	2.21	2.07	1.97
1290.1	2.13	1.98	1.87
1370.1	2.03	1.87	1.75
1450.1	1.80	1.64	1.53
1530.1	1.66	1.53	1.46
1610.1	1.88	1.71	1.58
1690.1	1.76	1.58	1.46
1770.1	1.66	1.49	1.37
1830.1	1.60	1.44	1.33
1910.1	1.53	1.38	1.28
1970.1	1.45	1.32	1.24
2050.1	1.44	1.34	1.29
2110.1	1.46	1.39	1.35
2190.1	1.52	1.49	1.48
2250.1	1.54	1.55	1.57
2330.1	1.63	1.70	1.76
2390.1	1.75	1.85	1.95
2470.1	1.86	2.02	2.18
2530.1	1.89	2.06	2.24
2610.1	1.77	1.92	2.07
2670.1	1.88	2.04	2.22
2750.1	2.09	2.25	2.42
2810.1	2.30	2.44	2.60
2890.1	2.67	2.78	2.92
2950.1	2.90	3.00	3.14

Harmonics Tables

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	5	+12	16	30	44	55	---	---	---	---
1	-	22	+0	23	32	34	39	50	74	---	---	---
2	72	50	48	58	53	45	>82	75	78	76	---	---
3	>90	69	61	>82	68	71	>82	79	>82	>82	---	---
4	>90	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82	---
5	>90	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82
6	>90	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82
7	>90	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82
8	>90	>82	82	>82	>82	>82	>82	>82	>82	>82	>82	>82
9	>90	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82
10	---	---	>82	>82	>82	>82	>82	>82	>82	>82	>82	>82
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 2600 MHz; 0.00 dBm.
LO IN: 3620 MHz; +17.00 dBm
IF OUT: 1020 MHz; -8 dBm

RF HARMONICS ORDER	(-dBm)	(-dBc)										
0	-	-	15	+2	26	44	54	60	---	---	---	---
1	-	22	+0	23	32	33	39	51	71	---	---	---
2	52	40	39	53	42	35	65	64	74	65	---	---
3	85	50	42	68	50	53	66	64	71	71	---	---
4	>90	73	70	80	60	72	66	86	74	84	>92	---
5	>90	78	91	76	68	88	64	87	73	87	>92	>92
6	>90	>92	>92	81	82	83	76	86	89	82	88	>92
7	>90	>92	>92	>92	87	>92	83	>92	88	>92	>92	>92
8	>90	>92	>92	>92	>92	>92	90	>92	88	92	>92	>92
9	>90	>92	>92	>92	>92	>92	91	>92	91	>92	>92	>92
10	---	---	>92	>92	>92	>92	>92	>92	>92	>92	>92	>92
	RF CAL	0	1	2	3	4	5	6	7	8	9	10

LO HARMONICS ORDER

Test conditions: RF IN: 2600 MHz; 10.00 dBm.
LO IN: 3620 MHz; +17.00 dBm
IF OUT: 1020 MHz; 1.92 dBm

Notes: 1. All Harmonics are in (dBc) relative to IF OUTPUT.
2. + entry denotes harmonics are in (dBc) above IF OUTPUT.
3. RF Cal represent the Harmonics level of the RF input signal to the mixer.